

# Work Order ID 71117

Thursday, June 23, 2011 11:04:07 AM



Page 1

Item ID: D2535

Accept



Setup Start



Revision ID:

Stop



Item Name: Spring

Start Date: 6/23/2011 Start Qty: 100.00



Cust Item ID:

Required Date: 7/4/2011 Req'd Qty: 100.00



Customer:

Reference:

Approvals: Process Plan: CL Date: 11/06/23 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D2535	Rev A								

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14354 Possible Supplier: Victoria Spring, 0.070 SS Torsion Spring

CL 11/06/23 100

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure Material Release Note is attached

11/06/23 100

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

Check dims to dwg

8 11/07/06

counter (FL100)

05/10/19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 71117**

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Item ID: D2535

Accept

Setup Start

Revision ID:

Stop

Item Name: Spring

Start Date: 6/23/2011 Start Qty: 100.00

Cust Item ID:

Required Date: 7/4/2011 Req'd Qty: 100.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

Identify as per dwg & Stock Location: 504

0.00



Packaging

Memo

0.00

Packaging

11/7/11

100

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/7/11

ME  
11-07-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Thursday, June 23, 2011 11:04:03 AM

Page 1

Work Order ID: 71117



Parent Item: D2535



Parent Item Name: Spring


Start Date: 6/23/2011

Required Date: 7/4/2011

Start Qty: 100.00

Required Qty: 100.00

Comments: IPP A□99.04.19□New Issue (From hand written IPP)□DM□

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2535P  Spring		Purchased	No			100	Each	0.0000	1	100		6/27/11	100

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

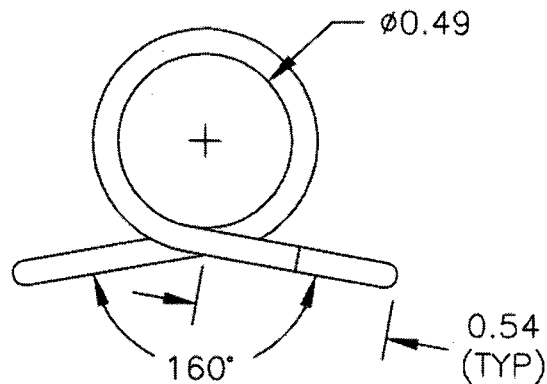
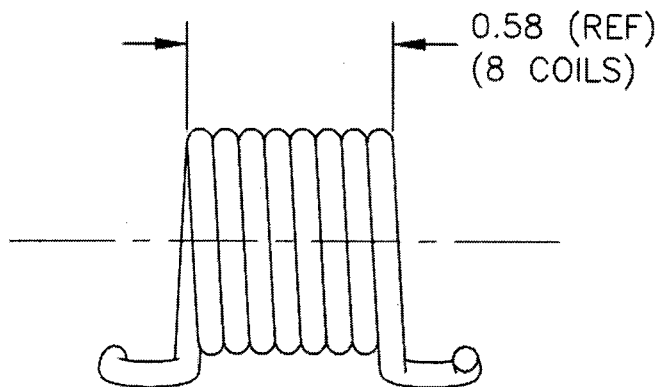
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



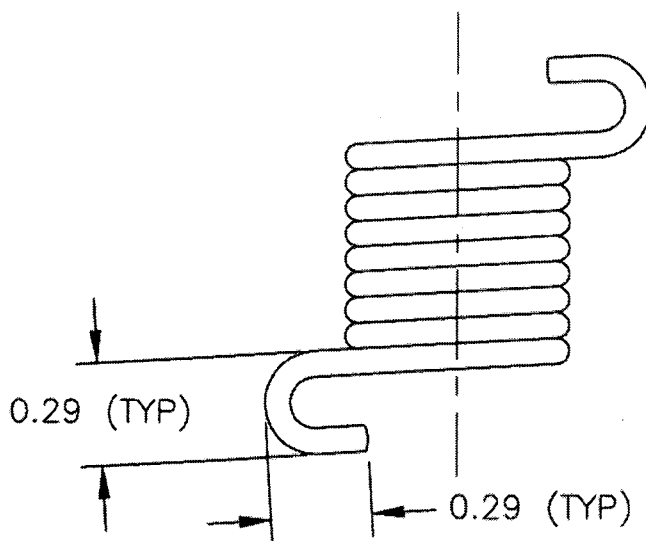
DESIGN BW	DRAWN BY RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED KE	APPROVED JH	DRAWING NO. D2535	REV. A SHEET 1 OF 1
DATE 99.04.08		TITLE SPRING SPEC CONTROL	SCALE 2:1
A	99.04.08	NEW ISSUE	

RELEASED  
99.05.11 KE



CHILLER 23

W10.71117



#### SPECIFICATION CONTROL DRAWING

TENSION SPRING WITH 8 COILS (NO GAP BETWEEN COILS)

MATERIAL: AISI STAINLESS STEEL  $\phi 0.070$

POSSIBLE SUPPLIERS: VICTORIA SPRINGS, P/N .070SS TENSION SPRING

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO14354**

Purchase Order Date 6/23/2011

PO Print Date 6/23/2011

Page Number 1 of 1

Order From :

VC-VIC002

VICTORY SPRING LTD.  
#2 6104 - 82 AVE.  
EDMONTON, AB T6B 0E7  
CA

Contact Name

Vendor Phone

866 230 5312

Vendor Fax

866 230 5338

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAKED**  
6/21/06/23

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2535P	Spring	7/4/2011 Yes	100.00 Each	FedEx PI collect	\$4.5600	\$456.00

Special Inst: AS PER DWG D2535 REV. A  
B71117  
VICTORY SPRING: 0.070 SS TORSION  
SPRING

PO Total:

\$456.00

CERTIFICATE OF CONFORMITY  
REQ'D UPON DELIVERY

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Change Nbr: 1

Change Date: 6/23/2011

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable





convenient. consistent. correct.

## PACKING SLIP

22745

#2, 6104 - 82 Ave  
Edmonton, AB T6B 0E7  
t + 780 442 4020  
f + 780 466 8000

BILL TO:

Dart Aerospace Ltd.  
1270 Aberdeen St.  
Hawkesbury ON K6A 1K7

SHIP TO:

DATE		ORDER No.		SHIP VIA	
4-Jul-11		PO14354		Fedex 151793240	
QUANTITY	DESCRIPTION			UNIT	AMOUNT
100	D2535P Torsion Spring				
GST #	TERMS	SUBTOTAL	FREIGHT	GST	TOTAL
854454527	NET 30 DAYS				

## CERTIFICATE OF CONFORMANCE

REPORT FOR : Dart Aerospace Ltd.	DATE: 7/4/2011
PART/DRAWING #: D2535P	PO # PO14354
SPRING DESCRIPTION: Torsion	QUANTITY: 100

CHARACTERISTIC	SPECIFIED	MEASURED	NOTES
Material type	SS302	yes	
Material diameter	0.07	0.072	per previous orders
Coil I.D.	0.490	0.5	
Coil O.D.			
Number of Coils	8 ref	7.9	
Free Length			
Helix	RHW	yes	
End type	per dwg.	yes	
Debur End			

### COMMENTS

8 11/07/06

Mill Certificate attached: yes  
Material Heat Number: 35771

Inspected by: *Jeremy Burrows*

## MATERIAL CERTIFICATION

REPORT FOR: Dart Aerospace Ltd.	DATE: 7/4/2011																																																							
PART/DRAWING #: D2535P	PO # PO14354																																																							
SPRING DESCRIPTION: Torsion	QUANTITY: 100																																																							
MATERIAL GRADE: T302 Stainless Steel Wire Spring ASTM-313-03																																																								
<p>PROPERTIES:</p> <table> <thead> <tr> <th colspan="3"><u>Chemical</u></th> <th colspan="2"><u>Physical</u></th> </tr> </thead> <tbody> <tr> <td>Carbon:</td> <td>( C )</td> <td>0.056</td> <td>Size:</td> <td>0.072"</td> </tr> <tr> <td>Chromium:</td> <td>( Cr )</td> <td>18.110</td> <td>Tensile:</td> <td>254,000 / 258,000</td> </tr> <tr> <td>Copper:</td> <td>( Cu )</td> <td>0.400</td> <td>Hardness:</td> <td></td> </tr> <tr> <td>Manganese:</td> <td>( Mn )</td> <td>1.580</td> <td></td> <td></td> </tr> <tr> <td>Molybdenum:</td> <td>( Mo )</td> <td>0.410</td> <td></td> <td></td> </tr> <tr> <td>Nickel:</td> <td>( Ni )</td> <td>9.200</td> <td></td> <td></td> </tr> <tr> <td>Nitrogen:</td> <td>( N )</td> <td>0.040</td> <td>Heat #</td> <td>35771</td> </tr> <tr> <td>Phosphorus:</td> <td>( P )</td> <td>0.031</td> <td></td> <td></td> </tr> <tr> <td>Silicon:</td> <td>( Si )</td> <td>0.460</td> <td></td> <td></td> </tr> <tr> <td>Sulphur:</td> <td>( S )</td> <td>0.001</td> <td></td> <td></td> </tr> </tbody> </table>		<u>Chemical</u>			<u>Physical</u>		Carbon:	( C )	0.056	Size:	0.072"	Chromium:	( Cr )	18.110	Tensile:	254,000 / 258,000	Copper:	( Cu )	0.400	Hardness:		Manganese:	( Mn )	1.580			Molybdenum:	( Mo )	0.410			Nickel:	( Ni )	9.200			Nitrogen:	( N )	0.040	Heat #	35771	Phosphorus:	( P )	0.031			Silicon:	( Si )	0.460			Sulphur:	( S )	0.001		
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Certified by: Jeremy Burrows

Victory Spring Ltd. certifies this to be a true & accurate copy of the original contained in the company records.